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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/812,770	03/20/2001	Douglas C. Dahlby	015685.P091	8877
45222 7590 05/17/2007 ARRAYCOMM/BLAKELY 12400 WILSHIRE BLVD SEVENTH FLOOR LOS ANGELES, CA 90025-1030				
			EXAMINER WONG, WARNER	
			ART UNIT 2616	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/812,770	DAHLBY ET AL.	
	Examiner	Art Unit	
	Warner Wong	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 50 is objected to because of the following informalities: on line 12, the limitation "first radio" should be corrected as "second radio", similar to the applicant's correction for claim 44, line 11.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 30-58 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter:

Regarding independent claims 41 and 50, they are written in a form of "machine readable medium". Firstly, such limitation is required to be rewritten in an acceptable language such as "a computer-readable medium storing instructions" as per the Interim Guide, p. 52.

When claims 41 and 50 fall within one of the statutory categories, we continue to ask the following question: Does the claimed invention cover a judicial exception? The answer is "Yes", i.e. an abstract idea-computer program.

Once the claim covers a judicial exception, we need to determine whether the claim recites (1) a physical transformation and (2) provides a useful, concrete and tangible result as a practical application. Thus, claims 41, 50 and their respective

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dependent claims are non-statutory because the patent protection sought by the claimed invention is for the computer program, an abstract, where independent claims 41 and 50 lack descriptive language in which the transformation steps yield a useful, concrete and tangible result.

Regarding independent claims 30, 44 and 53 they are written in a form of "method". However, as evidenced in claims 41 and 50, independent claims 30, 44 and 50 are claiming computer/software instructions in the form of a method. Note that claims 30 and 50 closely mirror claim 41, and claim 44 closely mirrors claim 50, and in light of the specification they are nothing more than the instructions of the application. Thus, similar to independent claims 41 and 50, independent claims 30, 44 and 53 also lack descriptive language in which the transformation steps yield a useful, concrete and tangible result.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 30-37 and 39-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over the TDMA/GSM standard as evidenced by the prior art of Vallstrom (US 6,804,212) in view of the prior art of Hicks (US 6,493,552).

Regarding claims 30, 41, 44, 50 and 53, Vallstrom describes the method (official notice given that it can be implemented in a machine/computer readable medium) of TDMA/GSM for opening a communication system (title), comprising:

sending a request message to the second radio to open a communication stream (fig. 1, step 12, mobile (first radio) sending the request to the base station BS (second radio));

receiving a channel assignment message from the second radio in a first time frame in response to the request message, the channel assignment message including an identification of an assigned communications channel for the communications stream, the assigned channel being in a slot of a repeating time frame (fig. 1, step 14, assignment message from the BS (second radio) is sent in a downlink frame (first time frame) per TDMA/GSM, col. 1, lines 35-36) , the channel assignment message including an identification of an assigned communications channel for the communication stream (col. 2, lines 3-5, the mobile uses the traffic channel indicated by the BS) , the assigned channel being in a slot of a repeating time frame (col. 1, lines 35-36 & col. 2, lines 3-5, in TDMA/GSM, mobile transmits traffic in designated time slots within repeating traffic channel frames);

sending data to the second radio in response to the channel assignment message in the assigned slot in the second time frame, the second d time frame immediately following the first time frame (fig. 1 step 16 & col. 2, lines 3-5, the (immediate) next step of start using the designated time slots of traffic channel).

Vallstrom describes that the TDMA/GSM subscriber has to be registered (col. 1, line 56), but fails to describe the TDMA registration process of:

registering a first radio with a second radio by sending identification information to the second radio.

Hicks describes the TDMA/cellular registration of:

registering a first radio with a second radio by sending identification information to the second radio (col. 1, lines 25-35, mobile (first radio) registering with the cellular infrastructure via a base station (second radio) its ISMI id).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify that the mobile registration includes sending identification information to the base station as described by Hicks for the mobile registration of Vallstrom.

The motivation is that this is a required registration step to supply data necessary for a call connection in a cellular/TDMA network (Hicks, 36-38).

Regarding claims 31 and 51, Vallstrom further describes:

receiving data from the second radio in the assigned slot in the second frame (fig. 1 step 16 & col. 2, lines 3-5, data in the designated time slots of the traffic channel is received by the BS (second radio)).

Regarding claims 32 and 52, Vallstrom further describes:

the assigned channel is in a first slot for sending data to the second radio and in a second slot for receiving data from the second radio, the method further comprising receiving data from the second radio in the second assigned slot in the second frame

(fig. 1 & col. 1, lines 35-36, the mobile sends data to the BS (second mobile) in designated timeslots (a first slot, = assigned channel) of the traffic channel, and the mobile receives data from the BS (second radio) in certain timeslots (a second slot) in the downlink frames (second frame)).

Regarding claim 33, Vallstrom further describes:

sending the request message comprises sending a request message to the second radio based on the registration in an uplink random access slot of a Time Division Multiple Access TDMA frame to open the communication stream (col. 1, lines 35-36 & 53-65, after successful registration in TDMA, the mobile request connection establishment by using a channel request message via a time slot in the RACH channel).

Regarding claim 35, Vallstrom further suggests:

sending a further request message to the second radio to open a further communication stream based on the registration, and receiving a further channel assignment from the second radio in response to the further request message, the further channel assignment message including an identification of a further assigned communications channel for the further communication stream (fig. 1, col. 1, lines 35-36 & col. 1 line 48 – col. 2 line 5, assuming that the mobile is registered with the cellular network, for initiating another separate connection the mobile again sends another communication request to the BS (second radio) and receives another assignment message where the mobile uses the time slots of the traffic (communications) channel as indicated by the BS, step 16).

Regarding claim 36, Vallstrom further describes:

closing the first communication stream before sending the further request message (the 2nd connection request in claim 35 is after the standardized TDMA/GSM call teardown (closing) processing of the 1st connection).

Regarding claims 37 and 46, Vallstrom further describes:

the request message comprises an extended training sequence to assist the base station in measuring spatial parameters (col. 1, lines 65-67, the BS uses the values (extended training sequence) from the received request message determine (measure) the distance-related (spatial) timing advance value, col. 1, lines 40-47).

Regarding claim 39, Vallstrom further describes:

the channel assignment message includes a timing correction for the first radio to apply when sending data over the assigned communication channel (col. 2, lines 1-3, the assignment message sent to the mobile (first station) includes the timing advance (correction)).

Regarding claim 40, Vallstrom further describes:

receiving a page from the second radio and wherein sending the request message comprises sending the request message in response to the received page (fig. 1, sending a page from the BS in step 10 & sending the request afterwards in step 12).

Regarding claims 42, 45 and 56, Vallstrom and Hicks combined further suggest:

the request message comprises an identification of the registration information (Hicks, col. 1, lines 41-43, in TDMA/GSM, connection requests include mobile identification to be matched to the registered identification in the HLR/VLR).

Regarding claims 47, Vallstrom further describes:

sending the channel assignment message comprises sending the channel assignment message using the spatial parameters (col. 1, line 65 – col. 2, line 3, sending the timing advance info (spatial parameters) in the assignment message).

Regarding claim 49, Vallstrom further describes:

sending a page to the first radio and wherein the request message is in response to the sent page (fig. 1, page message to the mobile (first radio) in step 10 before the request message in step 12).

Regarding claim 54, Vallstrom further describes:

the request message comprises an extended training sequence to assist the second radio in determining spatial parameters (col. 1, lines 65-67, the BS uses the values (extended training sequence) from the received request message determine (measure) the distance-related (spatial) timing advance value, col. 1, lines 40-47), and wherein the channel assignment message comprises receiving the channel assignment message directed using the spatial parameters (col. 2, lines 1-3, the assignment message received includes the timing advance (spatial parameters) to be used).

Regarding claim 55, Vallstrom describes:

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the channel assignment message comprises a training sequence (timing advance), but fails to describe that the extended training sequence is at least twice as long as the channel assignment message training sequence.

However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on the Appellant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Thus, it would have been obvious to one with ordinary skill in the art at the time of invention by applicant to utilize an extended training sequence at least twice as long as a training sequence since it is generally considered to be within the ordinary skill in the art to adjust, vary select or optimize the extended training sequence to be at least twice as long as the channel assignment message training sequence.

Regarding claim 57, Vallstrom further describes:

the assigned communications channel is shared with other radios (col. 1, lines 48-50, TDMA/GSM uses a shared downlink channel to send the assignment message).

Regarding claim 58, Vallstrom further describes:

registering further comprises sending configuration information including information regarding capabilities and communications environment of the first radio (col. 1, lines 53-56, registration informs which base stations are strong and strongest within the mobile's traffic area).

4. **Claim 38** is rejected under 35 U.S.C. 103(a) as being unpatentable over Vallstrom in view of Hicks as applied to claim 30 above, and further in view of Chuang (US 2002/0115459).

Vallstrom and Hicks combined fail to describe:

the request message includes information about a power level with which the request message is transmitted and wherein the channel assignment message includes information about a power level with which the first radio should transmit on the assigned communication channel.

Chuang describes:

the request message includes information about a power level with which the request message is transmitted and wherein the channel assignment message includes information about a power level with which the first radio should transmit on the assigned communication channel (fig. 2 & paragraph 28, connection request includes uplink interference power (information about a power level of transmitted request) and the access grant includes the assigned transmission power for the MS (first radio)).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify power level information in the request message and an

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assigned power level in the assignment message as in Chuang for the connection set up of Vallstrom.

The motivation for combining the teaching is that it refines the use of Kalman power control for the wireless GSM/EDGE network (Chuang, paragraphs 2 & 5).

Allowable Subject Matter

5. Claims 34, 43 and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

the prior art fails to neither describe nor suggest: "the random access slot is assigned during registering". The closest prior art, "The GSM System for Mobile Communications", by Michel Mouly & Marie-Bernadette Pautet, © 1992 ISBN 2-9507190-0-7, describes on p. 193 "The last type of access request to the network, in an uplink unidirectional channel. It is called the RACH (Random Access Channel). Its name indicates that mobile stations choose their emission time on this channel in a random manner."

Response to Arguments

6. Applicant's arguments with respect to claims 30-58 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: "The GSM System for Mobile Communications", by Michel Mouly & Marie-Bernadett Pautet, describing GSM technology, Mouldsley (US 6,611,514) describing secondary stations requesting service from a primary channel using RACH, Take (US 5,883,887), describing a radio transmission system using RACH for mobile station, Norstedt (US 5,926,469) describing GSM channel resource management, Krishnamurthi (US2001/0023186) describing system and method for base station initiated call setup, Ho (US 6,314,292) describing a method and apparatus for enhance call setup, Vaara (US 6,400,951) describing handover and call setup in mobile communications system and Ho (US 6,477,375) describing method and system for reducing call setup processing cost.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 6:30AM - 3:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on 571-272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Warner Wong
Examiner
Art Unit 2616

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Kwong Bin Yao', written over the printed name and title.